

REMARKS

In the Office Action mailed September 21, 2005 in the above case, claims 1-20 were examined. Claims 7 and 17 were rejected under 35 U.S.C. 112, 1st paragraph, as failing to comply with the enablement requirement. Claim 5 is rejected under 35 U.S.C. 112, 2nd paragraph, as indefinite.

Claims 1-3, 5-9 and 14-18 stand rejected under 35 U.S.C. § 103(a) over *Creger* (U.S. Publication No. 2003/0088321 A1) in view of *Kolmanovsky* (U.S. Patent No. 6,553,958). Claims 11-13 and 20 stand rejected under 35 U.S.C. § 103(a) over *Creger* in view of *Kolmanovsky* and further in view of *Hochgraf* (U.S. Publication No. 2003/044658 A1). Claims 4, 10 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form.

The title was objected to as non-descriptive. The Abstract was objected to as lengthy, with legalistic claim terms. The drawings were objected to as unclear.

Reconsideration and withdrawal of these rejections is respectfully requested in view of the above amendments and the remarks which follow.

A. The § 112 Rejection of Claims 5, 7 and 17 is Addressed.

Claim 5 has been amended as suggested by the Examiner by deleting “that” before “falls”.

Claims 7 and 17 stand rejected under 35 USC 112, 1st paragraph, as failing to comply with the enablement requirement. Claims 7 and 17 are said to recite parameter restoration in a general sense, while the specification addresses restoration in the context of a fuel cell. This rejection is respectfully traversed.

If one accepts the premise that claims 7 and 17 recite parameter restoration “in a general sense”, support for claims 7 and 17 when read in this manner is found in the specification at page 1, lines 9-10, which states that “the invention is in itself of general type and can be therefore applied to the control of physical systems of any type” (underlining added). Claims 7 and 17 should therefore be allowable under 35 USC 112, 1st paragraph, for this reason alone.

In addition, the characterization that claims 7 and 17 claim “parameter restoration in a general sense” is traversed. Claims 7 and 17 each recite specific

terms relating to parameter restoration, including “variation module”, “restore module”, “parameter”, “tolerance range”, and “controlled system”, elements which are fully supported in the specification. The terms relate to concepts recited in independent claims 1 and 14, from which claims 7 and 17 depend, respectively. The withdrawal of the rejection under 35 U.S.C. § 112, 1st, paragraph is thus proper and respectfully requested.

B. The Obviousness Rejection of Claims 1-3, 5-9 and 14-18 over Creger in view of Kolmanovsky is Addressed

Claims 1-3, 5-9 and 14-18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Creger et al* (U.S. Patent Publication No. US2003/0088321 A1) with *Kolmanovsky et al* (U.S. Patent No. 6,553,958). This rejection is respectfully traversed.

Essentially, there is simply no technical reason to combine the teachings of *Creger* and *Kolmanovsky et al*. Indeed, it is well settled that the motivation for combining references must come from the references themselves, and that the mere fact that the references technically “could have” been combined, given the teachings of the present invention as a guide, is not sufficient to sustain a rejection under 35 U.S.C. § 103(a). Indeed, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. In re Mills, 916 F.2d 680 (Fed. Cir. 1990). Although a prior art device “may be capable of being modified to run the way the apparatus is claimed, there must be a suggestion or motivation in the reference to do so.” *Id* 916 F.2d at 682. See also In re Fritch, 972 F.2d 1260, (Fed. Cir. 1992).

Creger teaches in paragraph [0004] that a

. . . . disadvantage of using neural networks to ‘learn’ improved and more efficient operations is that the process inherently takes a long period of time. Thus, the improvements are gradually implemented as the machine continues to work in a relatively inefficient manner.

Thus, it is *Creger’s* position that the typical learning process using neural networks is not suitable for their heavy machine application and instead a method is taught using “estimators” that completely bypasses the conventional learning process using neural networks. Given this premise of *Creger*, one

skilled in the art would not look to *Kolmanovsky* for an “associated training module” as suggested in the Office Action, when *Creger* has no need of this module, and specifically teaches against using one.

There being no motivation to combine the teachings of *Creger* and *Kolmanovsky*, *prima facie* obviousness cannot be premised on the combination of these two references. Withdrawal of the rejection of claims 1-3, 5-9 and 14-18 is proper and respectfully requested..

The obviousness rejection of claims 1-3, 5-9 and 14-18 is further flawed in that it applies improper “could have” tests. A review of pages 8-12 of the Office Action reveals a number of conclusive statements that *Creger* and *Kolmanovsky* “could have” been combined. Absent some reason or motivation in the references themselves, the “could have” standard is not sufficient to sustain a rejection under 35 U.S.C. §103(a).

C. The Obviousness Rejection of 11-13 and 20 *Creger* in view of *Kolmanovsky* and further in view of *Hochgraf* is Addressed

Claims 11-13 and 20 stand rejected under 35 U.S.C. § 103(a) as unpatentable over *Creger* in view of *Kolmanovsky* and in further view of *Hochgraf*. This rejection is respectfully traversed.

Because the combination of *Creger* and *Kolmanovsky* lacks a motivation to combine and is otherwise improper for the reasons given above, the further addition of *Hochgraf* does cure the deficiency relative to the combination of *Creger* and *Kolmanovsky*. Withdrawal of the rejection of claims 11-13 and 20 is respectfully requested.

D. The Indication of Claims 4, 10 and 19 as Reciting Allowable Subject Matter is Noted.

The indication of claims 4, 10 and 19 as containing allowable subject matter is noted and very much appreciated. However, in view of the further amendments and arguments made herein which are believed to clarify the patentably distinguishable features of claims 1-3, 5-9, 11-18 and 20, amendment of claims 4, 10 and 19 to independent form is not believed required.

F. Amendment to the Title Addresses the Specification Objection.

The title has been amended as suggested by the Examiner, thereby addressing the objection thereto. Withdrawal of the objection is respectfully requested.

G. Objections to the Abstract Addressed

The abstract has been amended to a shorter length, with legalistic terms removed. Withdrawal of the objection is respectfully requested.

H. Drawings Objections Addressed

The drawings stand objected to as containing certain errors. In response to the objections FIGS. 1 and 4 have been amended without introducing any new matter.

Figure 1 has been amended to label block 3, which is in FIG. 1, but unlabeled. Figure 1 has also been amended to move the "+" and "-" designations closer to the respective arrow heads for clarity. The assertion that the block boundaries are difficult to distinguish from the signal lines is noted. However, the Examiner has given no clear guidance as to what specifically should be done to correct this situation. Further, it is submitted that the drawing boundaries are sufficiently clear to be followed by those skilled in the art.

Figure 3 (which contains the arrow referred to by the Examiner) has been amended to change the numeral designation from "11" to "to 11".

In view of the amendments to the drawings and the above remarks, withdrawal of the objection is respectfully requested.


I. Conclusion.

In view of the above amendments, all claims now being in form for allowance, such action is respectfully requested. Should any issues remain, the Examiner is kindly asked to telephone the undersigned.

Although no fees are believed be due, please charge any fees herewith to
Deposit Account No. 50-1123.

Respectfully submitted,

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AMENDMENTS TO THE DRAWINGS

The 2 sets of replacement drawings filed herewith include the following changes:

FIG. 1 had been amended by addition of reference 3.

FIG. 3 has been amended by inserting "to 11".